

RELATIONSHIP OF A PROGRAM OF DIAGNOSTIC-PRESCRIPTIVE INSERVICE  
EDUCATION AND REGULAR CLASSROOM TEACHER ATTITUDES  
TOWARD HANDICAPPED PUPILS

BY

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The purpose of this study was to observe the relation of a diagnostic-prescriptive inservice education program on regular classroom teachers' attitudes toward handicapped pupils. This involved the formulation and pilot testing of an inservice education program focusing on the development of selected knowledges and skills.

This study addressed the question of modifying teachers' attitudes toward handicapped pupils by inservice education which focused on development of selected knowledges and skills and teachers' generalized use of these knowledges and skills. A sample of 56 regular classroom teachers from two school districts volunteered for five, two hours, inservice education sessions offered at six school sites. A diagnostic-prescriptive program was developed for a handicapped pupil chosen by each teacher using information presented in each session. The content of the five sessions included: characteristics of handicapped pupils, effects of

handicaps on the learning process, construction of a learning profile, curriculum modification, identification of curriculum materials, specialized methods, behavioral objectives, classroom organization and management. The Rucker-Gable Educational Programming Scale provided information on teachers' attitudes toward handicapped pupils for a randomly selected group prior to the inservice and for the other teachers after the inservice program. Teacher self-report prior to the inservice and teacher self-support, a case study, and observations after the inservice program were used to assess use of diagnostic-prescriptive elements with the target pupil. Teacher self-report before participation in the inservice education program and after participation in the inservice education program was used to assess the generalized use of the elements of a diagnostic-prescriptive format of instruction with other pupils in the classroom. A reactionnaire provided comments on the piloted inservice program.

After the completion of the inservice education program, 18 additional teachers volunteered for a similar inservice program. The Rucker-Gable Educational Programming Scale was administered to this group prior to the inservice sessions to provide additional attitude scores for comparison with the scores of the original group of teachers.

The results indicated that teachers' attitudes toward handicapped pupils were not modified significantly ( $\alpha < .05$ ) as a function of the inservice program. A significant ( $\alpha < .05$ ) number of teachers did employ the elements of a diagnostic-prescriptive format with the target pupil and with other pupils in their classrooms. Teachers' comments about the inservice education program were favorable.

Limitations of the study are discussed. Suggestions for further research are presented.

## CHAPTER I

### INTRODUCTION

The purpose of this study was to observe whether a diagnostic-prescriptive inservice education program is related to regular classroom teachers' attitudes toward handicapped pupils. Involved was the formulation and pilot testing of an inservice education program focusing on the development of selected knowledges and skills.

As a result of the requirements of The Education for All Handicapped Children Act of 1975 (PL 94-142), regular education is serving more handicapped pupils who have previously been removed from regular education classrooms. One requirement of the law is that provisions must be made for an individual educational program and for carrying out this education program in the least restrictive, yet most appropriate environment.

#### Need for Study

Implementation of PL 94-142 presents problems, in part, because of prevailing attitudes toward handicapped pupils. One facet of these problems is the attitudes of teachers; they must be considered when placing a handicapped pupil in a classroom because pupils are affected by the social impact.

Reviews by Abeson and Zettel (1977), Hewett and Forness (1974), and Melcher (1976) have indicated that mankind's attitudes toward the handicapped have been characterized by prejudice. A study conducted by Jones



(1974) attempted to differentiate attitudinal reactions to specific disability conditions. The question to be answered was, "are attitudes toward diverse groups of exceptionalities more homogeneous than results of present piecemeal studies indicate?" (Jones, 1974, p. 430). Instrumentation was a social distance questionnaire administered to 132 men and 132 women college students. The major categories were physically disabled (blind, chronically ill, crippled, deaf, hard-of-hearing, partially seeing, and speech handicapped), psychologically disabled (delinquent, emotionally disturbed, and severely retarded), and the mildly retarded-nonexceptional. The results showed that, with few exceptions, there was a common core of attitudes which cut across categories of disability.

Research on classroom teachers' attitudes toward the handicapped who are placed in regular classrooms suggests evidence of negativism. In fact, there appears to be a general attitude of rejection of the handicapped throughout the educational system. This attitude of rejection has been described by Harasymiw and Horne (1975).

While integration may be imposed from without by binding laws, it is the way that teachers perceive their role in the classroom and how they respond to the needs of all of the children that ultimately makes a difference in how effective a given innovative program happens to be. Researchers have shown that teachers are not unlike the general public in their attitudes toward the disabled. (p. 154).

Negative attitudes toward handicapped pupils seem to be caused, in part, by lack of appropriate skills. A fear of inability to cope with handicapped pupils in regular classrooms has been documented (Almanza, 1976; Birch, 1976; Harasymiw & Horne, 1975; Martin, 1974; Novotny, 1974). Development of skills for educating handicapped pupils should result in attitude change.

Planned educational experiences such as inservice education have been suggested by many writers (Barnes, 1975; Birch, 1974; Cohen, 1977; Haring, 1956; Martin, 1974) as a method for achieving attitude change toward handicapped pupils. Marsh and Friedman (1972) used discussion and simulation with school personnel and students to accomplish positive attitude change toward blind pupils. A slide-talk presentation and a classroom visit were used by Cronk (1978) to modify the attitude of PTA board members and selected teachers toward trainable mentally retarded pupils. These studies demonstrate the efficacy of employing inservice education programs to change attitudes toward the handicapped.

In summary, it has been documented that because of Federal mandate, increased numbers of handicapped pupils are receiving educational services in regular classrooms. It has been shown that regular classroom teachers have negative attitudes toward handicapped pupils partly because of their lack of certain knowledges and appropriate teaching skills to meet individual needs. Thus, it may be that teacher attitudes toward handicapped pupils may be changed through inservice education to become increasingly positive. The absence of research in the relationship of these factors serves as the rationale for this study.

### Questions Under Investigation

This study was designed to answer the following questions regarding the effects of a newly formulated inservice education program on attitudes and on teacher use of a diagnostic-prescriptive format of instruction with handicapped pupils in regular classrooms.

1. How do regular classroom teachers who have participated in the inservice education program compare with a similar group who have

not participated in the inservice education program with regard to attitudes toward handicapped pupils in their classrooms?

2. To what extent will regular classroom teachers who have participated in the inservice education program demonstrate ability to use the skills of a diagnostic-prescriptive format of instruction with handicapped pupils in their classrooms?

3. Will teachers who have participated in the inservice education program exhibit the ability to generalize the use of a diagnostic-prescriptive format of instruction to other pupils in their classrooms?

### Assumptions

Certain assumptions were made for purposes of this study. These assumptions concerned teaching skills and teachers' attitudes.

1. It was assumed that there are identifiable and observable teaching skills.

2. It was further assumed that these teaching skills can be developed through practice.

3. It was assumed that covert beliefs and attitudes would be manifested in overt classroom behaviors toward handicapped pupils.

### Limitations

Generalizability of the study is limited to the subject of the study because of a number of factors.

1. Implementation of the study deviated from the original design due to encountering unanticipated events. These unanticipated events are described in Chapter III.

2. The school districts were chosen because of accessibility to the researcher. Since they were not randomly selected they are not representative of a larger population.

3. The subjects were chosen because of their willingness to participate in the inservice education program. This sample cannot be considered representative of all teachers in the schools selected.

4. The time of the inservice education program limits the generalizability from the results of this study. The inservice education program was conducted in late spring near the end of the school year. Uncontrolled variables such as end-of-year testing and record keeping may have interacted with the independent variable (inservice education program) to influence the results of the study.

5. No attempt was made to observe the use of a diagnostic-prescriptive format of instruction by the participants beyond May 1979. Thus, no inferences can be made regarding the effects of long term use of a diagnostic-prescriptive format of instruction.

#### Definition of Terms

Attitude - A predisposition to react in a positive or negative manner toward a person or situation.

Handicapped Pupil - Any pupil who has been identified and staffed into a resource room for a portion of the school day and who spends the remainder of the day in a regular classroom will be considered a handicapped pupil in this study.

Regular Classroom - Any classroom designated by a public school system to be composed of regular pupils. Approximately 25 to 30 pupils of varying abilities within the normal range including mild to moderately

handicapped pupils who receive instruction from a certified teacher.

Regular Classroom Teacher - Any certified teacher who has been employed by the school system to teach a classroom that has not been designated as special education.

Inservice Education Program - A planned series of activities aimed at some change in knowledge and behavior of currently employed teachers.

Negativism - An attitude of skepticism about something affirmed by others.

Diagnostic-prescriptive Format - A teaching model which includes a learning profile, objectives, materials, methods, evaluation procedures, motivational techniques, and classroom management techniques that form a curriculum for a pupil.

### Organization of the Study

In Chapter I, the reader is introduced to the problem under investigation, a rationale for carrying out the study, and the questions to be answered. In Chapter II, a review is provided of the related literature regarding the following: attitudes toward the handicapped, the inter-relationship between inservice education programs and attitude change, and knowledges and skills needed by regular classroom teachers to meet the needs of handicapped pupils. In Chapter III, the design, instrumentation, procedures, and data analysis for the study are presented. In Chapter IV, the results of the investigation and the data analyses are provided. A discussion of the results, implications, and recommendations for further related research is presented in Chapter V.

## CHAPTER II

### REVIEW OF THE LITERATURE

Three bodies of literature were found to be relevant to the present study. These included the literature on teacher attitudes toward handicapped pupils, attitude change as a function of inservice education, and curriculum content for inservice education programs designed to effect attitude change. Regular classroom teachers who have handicapped pupils in their classrooms provide the focus.

#### Attitudes Toward Handicapped Pupils

The literature reveals an attitude of negativism toward handicapped pupils. Both research and nonresearch oriented writings indicate the presence of negativistic attitudes toward handicapped pupils by school personnel. In the following section, selected research studies from the voluminous literature concerning negative attitudes toward the handicapped follow the points made from nonresearch writings where they are related.

Garnett (1976) wrote of becoming aware of the strong feelings and prejudices of teachers concerning handicapped pupils. Garnett found awareness of strong feelings and prejudices to be substantiated by government reports. The reports state that many teachers reflected insecure feelings when forced to deal with handicapped pupils in regular classrooms.

Gorelick (1973) stated that many teachers exhibit prejudicial feelings toward pupils labeled as handicapped. The effects of a mental retardation label in eliciting negative attitudes have been discussed in a review of research by Novotny (1974). It was further pointed out that integration of mentally retarded pupils in regular classrooms does not insure social acceptance. Another summary of research on professionals' attitudes toward the mentally retarded by Gottlieb (1975) concurred with these findings. One finding was that regular classroom teachers expressed negative attitudes toward mentally retarded pupils on several dimensions including the desire to have less intimate contact with them. Cohen (1977) made a similar point.

Donaldson and Martinson (1977) stated that extensive research has been conducted in the last decade on the existence of negative attitudes toward the physically handicapped. They indicated that negative attitudes prevail.

Teachers generally have viewed handicapped pupils with the expectation that the pupils will exhibit deviant behavior. Graubard (1973) has suggested that deviances in behavior are largely social phenomena related to the perceiver's expectations. Young (1976) wrote that school administrators commented, "that special class pupils were usually troublesome and generally uncooperative" (p. 169). Novotny (1974) discussed Johnson's findings that teachers did not think that the special student got along socially with other students. These teachers had slow learners or high mentally handicapped pupils in their classrooms.

A cyclical effect may occur in that teachers expect deviant behavior on the part of handicapped pupils due to social prejudices that exist. The handicapped pupil may demonstrate the expected behavior, thus rein-

forcing the teacher's negative attitudes. It would seem unrealistic to expect positive teacher attitudes under these conditions.

Negativism toward handicapped pupils does not seem to be limited to or focused upon any select group of handicapped individuals. Using the categories of physically disabled, psychologically disabled, and mildly retarded-nonexceptional, Jones (1974) found that a general overall negative attitude exists toward all categories of disability.

One reason that teachers have negative attitudes toward handicapped pupils is fear of being unable to cope with handicapped pupils in the classroom. Birch (1976) stated that teachers who have not had handicapped pupils in their classrooms possess apprehensions and fears about the handicapped. Birch called for efforts to develop teachers' confidence and competence in order to overcome their feelings. Lack of experience with handicapped pupils and lack of training results in fears and anxieties (Martin, 1974). Martin called for massive efforts to work with regular classroom teachers in a multiplicity of ways to assure their success in working with these pupils. A review of numerous research studies conducted by Novotny (1974) found that regular classroom teachers expressed the need for special education skills.

In summary, the literature reflects the prevalence of negative attitudes by teachers toward handicapped pupils. Teachers' negative attitudes toward handicapped pupils in their classrooms is compounded by the teachers' fears and anxieties about their ability to meet the needs of handicapped pupils. This negativism is not limited to a select group but pervades the handicapped population and educational strata.



### Attitude Change and Inservice Education

Included in this section is a brief discussion of theories associated with attitude and attitude change. This discussion is followed by a review of selected studies focusing on attitude change as a function of inservice education.

Attitude has been defined as a predisposition to react in a positive or negative manner toward a person or situation. Attitudes are formed from one's experiences and have been seen as affective responses to environmental stimuli (Blair & Kershner, 1976; Bond & Weisgerber, 1977). Once attitudes have been formed they become stable and resistant to change (Sherif & Sherif, 1976; Swanson, 1972).

Analysis of attitudes has led to the identification of three components. These components are cognitive (thinking), affective (feeling), and conative (acting) (Brodwin, 1976; Triandis, 1971). While there has been considerable attention given to attitude change, the exact dynamics involved have not been determined with certainty.

Triandis (1971) stated that since there is a tendency for consistency among attitude components, changes in any component will be reflected by changes in the others. Therefore, creating a state of imbalance and incongruence among components will produce change. Various authors have noted the presence of tension and dissonance in a response to a situation that violated a personal belief (Sherif & Sherif, 1976).

The preceding discussion implies the possible validity of employing an inservice education model to change the cognitive and conative components of an attitude, resulting in change in the affective component. The use of planned experiences such as inservice education to achieve change in attitudes toward handicapped pupils has been suggested by many

writers (Barnes, 1975; Birch, 1974; Cleary, 1976; Cohen, 1977; Haring, 1956; Martin, 1974; Mitchell, 1976; Novotny, 1974).

According to Halloran (1976), attitudes are most likely to change when communications (in this instance, inservice education) relating to the individual's needs are reinforced by related events, when these communications receive social support, and when avenues or courses of action are suggested. Inservice education can fulfill each of these characteristics. Positive attitudes are likely to result when experiences prove to be enjoyable (Bond & Weisgerber, 1977). Through an inservice education program which is designed to impact on teachers' skills in working with handicapped pupils, attitudes toward this population may be modified.

One may conclude from research previously done that various types of educational programs have resulted in attitude change toward the handicapped. Brooks and Bransford (1971) found that administrators and regular classroom teachers exhibited more positive attitudes toward handicapped pupils following participation in a practicum with exceptional children and sensitivity training. The conclusion of this study was that knowledge of attitudes and behavioral aspects of exceptional children and knowledge of the goals of special education facilitated acceptance of handicapped pupils in regular classrooms. Another study using a training program consisting of a slide-talk presentation focusing on the pupils and activities in trainable mentally retarded classrooms plus a visit to the classrooms resulted in more positive attitudes in PTA board members and randomly selected teachers (Cronk, 1978). Discussion and simulation have been found to be effective in modifying attitudes toward blindness (Marsh & Friedman, 1972). This study

involved school personnel who were enrolled in a summer institute. Data were derived from an attitude scale administered before and after the education program. These studies confirmed the results of an earlier work by Haring (1956) in which an inservice workshop of 15 sessions was the intervention employed to improve attitudes of personnel from four schools toward handicapped pupils. Knowledge acquired from the workshop plus experience with handicapped pupils appears to be effective in modifying attitudes.

A balance between theory and practice appears to be related to the success of inservice education (Nicholson, Joyce, Parker & Waterman, 1976). This implies a relationship between knowledge and performance. Research by Haring (1956) substantiated the effectiveness of classroom experience with exceptional pupils concurrent with inservice education. Hersh, Carlson and Lossino (1977) reached the same conclusion, that knowledge and social contact with the mentally retarded were more effective in modifying attitudes than was knowledge alone. Information drawn from a semantic differential instrument completed by 20 students enrolled in a course on developmental disabilities formed the basis for this finding. The work of Prothero and Ehlers (1974) resulted in the finding that knowledge per se appears not to be effective in changing attitudes. Semantic differential scales to measure attitudes were administered to 46 social work students before and after completion of a programmed text in mental retardation. Each unit of instruction was pretested and posttested to determine knowledge gain. The increase in knowledge did not change attitudes toward the handicapped. These findings concurred with Gottlieb's (1975) conclusion following a review of literature on attitude change. He suggested that field work experiences were more effective than lectures.

Implications for inservice education to effect attitude change are evident. Teachers need inservice education including both knowledge and practical experience.

### Skills Needed by Regular Classroom Teachers

From a review of the literature it appears that no research has been done to determine which knowledges and skills are necessary for regular classroom teachers to work effectively with handicapped pupils. There is, however, considerable theory. In the writings reviewed, there was consistent agreement as to which knowledges and skills are needed by regular classroom teachers of handicapped pupils.

Gorelick (1973) stressed the need for specialized skills by regular classroom teachers to help overcome prejudices in integrating handicapped pupils into the mainstream of education. Various classifications and descriptions of skills and knowledges have been proposed for the content of inservice education for regular classroom teachers who have handicapped pupils in their classrooms. However, the pedagogy of special education provided the focus.

The present review of current literature reveals that the need to train regular classroom teachers in techniques for working with handicapped pupils has been addressed by many writers. Two main sources of skill identification have been evident. Skills that have been traditionally taught to special education teachers have been one source. An additional source for skill identification has been to survey regular classroom teachers to determine the skill they perceive to be necessary for effective teaching of handicapped pupils.

A survey of literature revealed a consistent group of identified skills deemed necessary for regular classroom teachers to successfully meet the needs of handicapped pupils. A review of Dean's Grant Projects and information from the University of Miami Training and Technical Assistance Center provided information similar to published writings. While terminology and classification have varied, skills identified can be categorized under major headings.

Knowledge of characteristics of handicapped pupils has been identified as necessary for regular classroom teachers to know (Cochran & Westling, 1977). This knowledge was included in an inservice program which was described by Hall, Cartwright and Mitzel (1975). Mopsik and Hession (1975) listed an objective for training which was stated as enabling the teacher to observe and identify children with potential learning problems. Inherent in this objective was knowledge of characteristics of handicapped pupils.

Ability to make diagnostic assessment including evaluation of learning styles, strengths and weaknesses, and levels of academic performance was identified as a cluster of related skills necessary for regular classroom teachers to possess. Birch (1974) suggested teacher training to facilitate evaluation of pupil achievement. Grotzky (1976) and Witty (1976) stated that teachers should be able to diagnose strengths and weaknesses by means of formal and informal measures. A similar objective, which was identified by Hall et al. (1975), was the ability to use diagnostic procedures to obtain precise information about a pupil's strengths and weaknesses on educationally relevant variables. The sophisticated use of achievement tests for diagnostic purposes was suggested by Mann and McClung (1975). Lewis (1971) suggested that teachers

need knowledge about handicapped pupils that will enable them to diagnose learning needs. Sanford, Samrau, and Wilson (1974) included behavioral assessment of the child's existing behavior in a training program. Isaacson (1977) had teachers rate competencies identified from a survey of Dean's Grant Projects. Accommodating the needs and capitalizing on the pupil's strengths were listed as important skills in the survey. Birch (1974) stated that regular classroom teachers should be able to interpret diagnostic information presumably prepared by other sources.

Curricular adaptation, a skill associated with individualizing instruction and with using special methods and materials, has been suggested as necessary for successfully working with handicapped pupils (Birch, 1971; Garnett, 1976; Meisgeier, 1975; Sanford et al., 1974). Surveyed teachers (Manzitti, Boratynski and Radar, 1976) also suggested that curricular adaptation is an important skill.

The identification and modification of materials and media appropriate to the needs of handicapped pupils have been suggested by many writers. Birch (1974) stated that unique or adapted instructional materials constitute one of the most "special" aspects of meeting the needs of handicapped pupils. The ability to choose and use special materials appropriate for specific strategies was an objective of a training program which has been described by Hall et al. (1975). In meeting the needs of the learning disabled pupil in the regular class, materials and media must be modified according to Mann and McClung (1975). A training program for staff to integrate preschool handicapped pupils included development and utilization of appropriate materials (Sanford et al., 1974).

Skill in identification and modification of materials and media appeared on teacher surveys conducted by Manzitti et al. (1976) and Markell (1976). Modifying materials for instruction including increased use of media and teacher-prepared materials was listed as one way home economics teachers were meeting the needs of special pupils (Whiteford & Anderson, 1977).

Knowledge of and skill in utilizing several approaches to organization for instruction have been suggested as necessary to meet the needs of handicapped pupils. Among these approaches to organization for instruction are learning centers (Meisgeier, 1975; Witty, 1976), team teaching (Birch, 1971), and the use of aides and paraprofessionals (Birch, 1971; Manzitti et al., 1976). Home economics teachers surveyed by Whiteford and Anderson (1977) utilized aides and students to cope with handicapped students in their classes. Hall et al. (1975), Mann and McClung (1975), and Witty (1976) referred to the necessity of skill in structuring the environment for effective learning.

Strategies for individualizing instruction is another skills area which has been identified as being needed by classroom teachers. Birch (1974) reported key factors in integrating handicapped pupils into regular classrooms. He suggested that a solution to the concerns about curriculum would be to individualize the instructional program. As reported by Grotzky (1976), topics used in an inservice training program designed to develop skills for individualizing instruction included such things as adapting subject area tests for poor readers, using special math techniques for slow learners, and using special reading procedures for pupils with poor auditory channels. The necessity of providing an individualized program was identified by Mann and McClung (1975), Meisgeier (1975), and Klein (1977).

Although described as developing and prescribing remedial programs, Mopsik and Hession (1975), Witty (1976), and Wolf (1975) implied that skills in individualizing instruction are important. Almanza (1976) observed that many teachers turned to techniques to individualize instruction as a way of serving pupils in the mainstream of education. Lewis (1971) made the point that teachers should learn skills in conducting individualized instruction for all children in a classroom.

Results of teacher surveys by Isaacson (1977) and Markell (1976) agreed that skill in individualizing instruction is essential for regular classroom teachers who have handicapped pupils in their classes. Whiteford and Anderson (1977) described a survey conducted to determine how home economics teachers were coping with handicapped pupils in their classrooms. The information was of interest for the development of training programs. Modification of instruction for handicapped pupils included individual instruction and individualized projects.

Skill in utilizing specialized teaching strategies appropriate for handicapped pupils has received emphasis. Birch (1971) pointed out that by understanding common components of various methods of teaching, teachers can bridge the span between special and regular educational methods. Topics for inservice training described by Grotzky (1976) included specialized teaching strategies. The ability to choose and use specialized teaching strategies appropriate for pupils with varying needs was listed as an objective in a Diagnostic Teaching Model in the Computer Assisted Renewal Education Project (Hall et al., 1975). Specialized teaching methodology was a training component in a project to facilitate integration of handicapped preschool children (Sanford et al., 1974). Home economics teachers in Isaacson's survey (1977) gave strong support



to the need for teaching techniques appropriate for special needs students.

Behavior analysis and classroom management skills have been identified as being essential. Selection of techniques for effective classroom management was identified as an objective in training programs described by Hall et al. (1975) and Mopsik and Hession (1975). Mann and McClung (1975) stated that behavior management was an integral part of their training program for meeting the needs of learning disabled pupils. Applied behavioral analysis was a component in the retraining of regular classroom teachers to work with handicapped pupils in the Houston Plan (Meisgeier, 1975). Sanford et al. (1974) reported that staff training to meet the needs of handicapped preschool pupils in a mainstream setting included behavior analysis techniques. Behavior management and behavior modification were suggested in teacher surveys which were conducted by Isaacson (1977), Markell (1976), and Wolf (1975).

It is evident that a great deal of attention has been focused on identification of skills needed by regular classroom teachers to effectively educate handicapped pupils in the least restrictive environment. There is a high degree of consensus among the writers and teachers surveyed as to which skills are essential. These knowledges and skills may be categorized in the following way:

1. Knowledge of characteristics of handicapped pupils,
2. Skill in making diagnostic assessments,
3. Skill in making curricular adaptations,
4. Skill in identifying and modifying of materials and media,
5. Skill in organizing instruction and the environment for effective learning,

6. Skill in individualizing instruction and educational prescriptions,
7. Skill in utilizing specialized teaching strategies, and
8. Skill in utilizing behavior analysis and classroom management techniques.

These skills can be organized into a concise diagnostic-prescriptive format. This format would include the construction of a learning profile from assessment information about each pupil. Through the use of the learning profile, appropriate objectives, materials, methodology, and evaluation procedures can be identified to develop a curriculum to meet the needs of the handicapped pupil. Appropriate motivational and behavioral management techniques can be identified. A plan of classroom organization to accommodate the implementation of a diagnostic-prescriptive format can be designed.

### Summary

Literature has been reviewed in the three areas related to this study: (1) the existence of negative attitudes toward handicapped pupils, (2) the interrelationship between attitude change and inservice education, and (3) the knowledge and skills needed by regular classroom teachers to meet the needs of handicapped pupils in regular classrooms.

It was shown that regular classroom teachers have negative attitudes toward handicapped pupils partly because of their lack of appropriate teaching skills to meet individual needs. Teacher attitudes toward handicapped pupils may be changed in a positive manner through inservice education which would focus on a diagnostic-prescriptive format of teaching. Such inservice education should include theory concurrent with practical application with handicapped pupils.

## CHAPTER III

### DESIGN

The purpose of this study was to observe whether a diagnostic-prescriptive inservice education program is related to regular classroom teachers' attitudes toward handicapped pupils. Involved was the formulation and pilot testing of an inservice education program focusing on the development of selected knowledges and skills. The following questions were addressed:

1. How do regular classroom teachers who have participated in the inservice education program compare with a similar group who have not participated in the inservice education program with regard to attitudes toward handicapped pupils in their classrooms?
2. To what extent will regular classroom teachers who have participated in the inservice education program demonstrate the ability to use the skills of a diagnostic-prescriptive format with the handicapped pupils in their classrooms?
3. Will teachers who have participated in the inservice education program exhibit the ability to generalize the use of a diagnostic-prescriptive format to other pupils in their classrooms?

#### Procedure

The following steps were taken:

1. The problem under investigation was identified.

2. Knowledges and skills deemed necessary to meet the needs of handicapped pupils in regular classrooms were identified.

3. An inservice education program was formulated.

4. A research design was selected to carry out the experiment.

5. Appropriate personnel in Clay and Duval County school systems in Northeast Florida were contacted for permission to conduct the study in these school districts.

6. Professional development personnel were contacted for assistance in notifying teachers of the inservice education program and arranging for the (inservice education) program sites.

7. Orientation meetings were held at the sites with regular classroom teachers who had volunteered for the inservice education program. Preassessment information materials were distributed.

8. One inservice education session was conducted each week for five succeeding weeks.

9. Postassessment information materials were distributed.

10. Classroom observations were made to verify the use of a diagnostic-prescriptive format of instruction with a handicapped pupil.

In the remainder of this chapter, these steps are described in detail. Assumptions underlying the experimental design, specific instrumentation, subjects, actual developments including those not anticipated, data analysis and hypotheses are also presented.

### Experimental Design

A posttest-only control group design (Campbell & Stanley, 1963) was selected to compare two groups with regard to attitudes toward handicapped pupils. A representation of the design follows:

$$R \quad X \quad O_1$$

$$R \quad O_2$$

R represents randomization of subjects and X represents treatment.  $O_1$  and  $O_2$  represent posttests administered to subjects.

In the discussion of this design Campbell and Stanley (1963) have made several points related to internal and external validity. One point is particularly pertinent to attitude measures. The posttest-only control group design controls for the interaction of testing and treatment but control for other factors related to external validity is questionable. Control is provided for all factors related to internal validity. This type of study cannot impute causality. The best that can be hoped for is to suggest that, with a relationship stronger than would normally occur by chance, the independent variable might be impacting on the dependent variables.

Unanticipated factors caused modification in this design as actually implemented. It was spring when all steps prerequisite to the treatment phase had been completed. Due to the approaching conclusion of the school term, school personnel requested that this inservice education program be completed before the end-of-school testing program commenced. This resulted in all teachers participating in the inservice education program simultaneously. As a result of the above mentioned development, an attempt was made to strengthen the weakened research design.

A representation of the resultant design for assessing teacher attitudes toward handicapped pupils follows:

$$R \quad O_1 \quad X$$

$$R \quad X \quad O_2$$

R represents randomization of subjects and X represents treatment (inservice education program).  $O_1$  represents a pretest (attitude scale) for

one group of teachers and  $O_2$  represents a posttest (attitude scale) for the other group of teachers.

Campbell and Stanley (1963) have discussed possible sources of error of this design in regard to factors related to internal validity. History, maturation, mortality, and interaction of selection and maturation may provide sources of error for this design with instrumentation being the questionable factor. External validity has been shown to be strong in this design.

In May 1979, at the conclusion of data collection for this study, the Duval County school system announced to all teachers that an inservice education program similar to the inservice education program of this study would be offered in June 1979. The researcher was consultant for the June inservice education program. The participants of this program met the requirements of the original study; that is they volunteered to participate in the inservice education program, and they had an identified handicapped pupil in their classroom. Attendance for the June inservice education program numbered 18. The same attitude scale that was given to the original sample population was administered to this sample population at the beginning of the first inservice session. These pretest data were compared to the data from the original inservice education program sample population in regard to attitudes toward handicapped pupils. This comparison was another attempt to strengthen the research design.

Use of the elements of a diagnostic-prescriptive format of instruction with a selected handicapped pupil was assessed in the following manner:

$$O_1 \times O_2 \quad O_3 \quad O_4$$

O represents a pretest (teacher self-report) on the use of the elements of a diagnostic-prescriptive format of instruction. X represents treatment (inservice education program). O<sub>2</sub> represents a posttest (teacher self-report) on the use of the elements of a diagnostic-prescriptive format of instruction. O<sub>3</sub> represents a posttest (case study) and O<sub>4</sub> also represents a posttest (classroom observation).

The following diagram represents the assessment of the generalized use of the elements of a diagnostic-prescriptive format of instruction.

$$O_1 \times O_2$$

O<sub>1</sub> and O<sub>2</sub> represent a pretest and a posttest (teacher self-report). X represents treatment (inservice education program). The results of these two designs apply only to the group involved in the study.

#### Instrumentation

The following variables were analyzed:

1. Teacher attitudes toward appropriate program placement for handicapped pupils,
2. Use of the elements of a diagnostic-prescriptive format of instruction with handicapped pupils, and
3. Generalized use of the elements of a diagnostic-prescriptive format of instruction with other pupils in the classroom.

#### Attitudes

The Rucker-Gable Educational Programming Scale (Rucker & Gable, 1973) was used to address the first question of this study, "How do regular classroom teachers who have participated in the inservice education program compare with a similar group who have not participated in the

inservice education program?" The Rucker-Gable Educational Programming Scale (RGEPS) reflects respondents' attitudes toward educating handicapped pupils in various educational environments.

The RGEPS consists of 30 brief descriptions of pupils actually referred for special education services (Rucker & Gable, 1974, p. 2). Respondents choose what they feel is the best educational placement for each pupil from a continuum of seven educational placements. These placements include regular classroom, consultation, consultation and direct services, resource room, part-time special class, full-time special class and residential school or hospital placement.

The instrument provides an attitude score obtained by adding the weighted responses of the 30 items. Six attitude subscores can be computed. Three of these subscores represent attitudes toward mentally retarded, emotionally disturbed, and learning disabled children, respectively. The remaining subscores reflect attitudes toward these three exceptionalities based on the degree of the disability (mild, moderate, or severe). The scale can be administered in 20 to 30 minutes.

Validity and reliability information are available in the Rucker-Gable Educational Programming Scale Manual (Rucker & Gable, 1974). This instrument was developed by submitting actual descriptions of children referred for special education services to panels of content experts, pilot judges, general experts, specific experts, and finally a combination of these. Inter-rater reliabilities for the final edition of the test ranged from .87 to .99 for the subscores with .99 for the total score.

Internal consistency reliabilities ranged from .81 to .96 for respondents' attitudes using a split-half method. Calculations used



attitude raw scores for the scores for the six scales and the total score.

Content validity of this instrument is supported by the following:

1. In order to categorize exceptionality areas, actual case descriptions were evaluated by 20 content experts. Exceptionality areas were identified as mental retardation, emotional disturbance, and learning disabilities.

2. Item appropriateness was determined by 20 general experts and 45 specific experts.

3. A group of 30 items was selected which represents a continuum of disability across these three areas.

Knowledge of appropriate program placements for handicapped pupils can also be measured with the RGEPS.

#### Diagnostic-Prescriptive Format

The second major question of the study was, "To what extent will regular classroom teachers who have participated in the inservice education program demonstrate the ability to use the skills of a diagnostic-prescriptive format of instruction with handicapped pupils in their classrooms?" It was necessary for the investigator to design the items to assess this question. In Chapter II, a review of current literature regarding knowledges and skills needed by regular classroom teachers who have handicapped pupils in their classrooms has been presented. These knowledges and skills were organized into the elements of a diagnostic-prescriptive format of instruction. A description of these elements is presented in Appendix A. A questionnaire reflecting each of the elements of a diagnostic-prescriptive format of instruction was designed for teacher self-report. A copy of this questionnaire is presented in Appendix B.

Actual teacher products in the form of a case study were also used as a method of evaluating the use of a diagnostic-prescriptive format of instruction by regular classroom teachers with handicapped pupils in their classrooms. These products included the following items:

1. A learning profile
2. Behavioral objectives
3. Appropriate materials to implement the objectives
4. Appropriate methodology to implement the objectives
5. Appropriate evaluation procedures
6. Appropriate motivational techniques
7. Appropriate classroom management techniques.

The case study was developed around the elements of a diagnostic-prescriptive format of instruction. A description of these elements has been provided in Appendix A.

In addition, classroom observations were conducted to see if the elements of a diagnostic-prescriptive format of instruction were being implemented as stated. Observations of each teacher's classroom resulted in classification of behavior into one of three categories. If no element of the diagnostic-prescriptive format of instruction was being implemented, "none" was recorded by the observer. If the teacher was implementing any of the seven elements of the diagnostic-prescriptive format, "part" was recorded. If all elements of a diagnostic-prescriptive format of instruction were being implemented, the observer recorded "all." Observation of each teacher resulted in a record of "none," or "part," or "all."

The third question inquired whether teachers who have participated in the inservice education program exhibit the ability to generalize the

use of a diagnostic-prescriptive format of instruction to other pupils in their classrooms. The questionnaire described in the preceding section was designed to include this information (see Appendix B). Teacher self-report was the method of assessment employed to determine the use of the elements of a diagnostic-prescriptive format of instruction with other pupils in their classrooms.

### Subjects

Regular classroom teachers from two school districts, Clay County School District and Duval County School District in Northeast Florida, who had identified handicapped pupils in their classes were invited to participate in the inservice education program. The directors of professional development in the two districts notified school faculties that an inservice education program to develop knowledges and skills for mainstreaming handicapped pupils was available to teachers who met two requirements. These requirements were (1) the teacher must have an identified handicapped pupil in the class, and (2) the teacher must volunteer for the inservice education program. Teachers who participated in the program were informed that they would receive 10 Master Plan points for participating.

Responses indicating interest were received from 74 regular classroom teachers. Grade levels taught included 14 senior high school teachers (grades 9-12), 8 middle school teachers (grades 6-7), and 52 elementary school teachers (grades 1-5). The teachers ranged in age from 24 years to 55 years with a mean age of 36 years. Teaching experience of the teachers ranged from 1 year to 33 years with a mean of 12.5 years of teaching experience.

Clay County School District includes a suburban town and several small rural towns. Teachers from 2 high schools, 2 middle schools, and 9 elementary schools in this district participated in the inservice education program. Duval County School District is a large urban area (579,400 population) in which busing is employed to achieve an integrated racial balance. Teachers from 3 high schools, 4 middle schools, and 15 elementary schools in this district participated in the inservice education program.

### Data Collection

In March 1979, all arrangements had been completed to begin the inservice education program. Due to the impending end-of-year testing program, school personnel requested that the inservice program be completed by May 1, 1979. This request necessitated conclusion of the inservice education program earlier than had been anticipated. Thus, all participants experienced the inservice education program simultaneously.

### Pretest

Organizational meetings were held between March 7, 1979, and March 26, 1979, at the school sites. During these meetings, schedules for dates and times for the inservice sessions were completed. Each participant received an envelope containing a form requesting information concerning grade and/or subject taught, pupil who would serve as the case study, daily schedule, and perceived needs for the inservice education program. Each participant also received a questionnaire to report the use of the elements of a diagnostic-prescriptive format of instruction with the handicapped pupil who would serve as the case study and with other pupils in the classroom. One group of teachers whose names had

been randomly picked from a hat received the RGEPS to assess attitudes toward handicapped pupils. A detailed instruction sheet was included. These teachers were requested not to discuss the RGEPS with anyone. The group of teachers whose names had not been picked from the hat did not receive the RGEPS. All forms in the envelope were completed and returned during the first inservice session.

### Inservice Education Program

The inservice education program consisted of five sessions, each of two hours duration. The sessions occurred once each week for five succeeding weeks following the organizational meetings. The format of the inservice sessions was lecture and discussion. Participants shared information concerning their case study. Content of the inservice education program has been provided in Appendix C.

A summary of the inservice sessions follows:

Session I focused upon the characteristics of the pupil selected for the case study and how these characteristics impact on the learning process. Construction of a learning profile was discussed. The assignment required the regular classroom teachers to construct a learning profile for the selected handicapped pupil based on information available from school records, special education personnel, guidance counselors, etc.

Session II dealt with task analysis of subject area curricula. The assignment required the regular classroom teachers to perform a task analysis of one subject area curriculum and modify this curriculum relative to the strengths and weaknesses of the selected pupil's learning profile.

Session III addressed the identification and modification of materials and media, as well as the identification of appropriate instructional techniques to account for the strengths and weaknesses of the selected pupil. The assignment required the regular classroom teachers to perform these functions related to the handicapped pupil selected for the case study.

In Session IV, alternative evaluation methods and behavioral objectives were discussed. The assignment required the regular classroom teachers to write behavioral objectives for the modified curriculum to reflect appropriate materials, instructional techniques, and evaluation procedures to accommodate the strengths and weaknesses of the selected pupil's learning profile.

Session V focused on organization of the learning environment, motivational techniques, and behavior management techniques. The assignment required the regular classroom teachers to plan strategies to organize the learning environment to accommodate both the handicapped pupil and normal pupils in the classroom. The teachers also identified appropriate motivational and behavior management techniques for the selected handicapped pupil.

Briefly, the inservice education program attempted to guide the participants into the use of a diagnostic-prescriptive format of instruction. Each regular classroom teacher selected a pupil who had been identified by the school system as being handicapped. The teacher developed a case study in reference to this pupil. Behavioral objectives were derived based on information from a learning profile. Materials, methodology, and evaluation procedures compatible with the pupil's learning profile were identified and implemented resulting in an

individualized curriculum. Motivational and classroom management techniques appropriate for the selected pupil were identified and implemented.

### Postassessment

At the conclusion of the inservice education program, all participants were again given an envelope containing a questionnaire (see Appendix B) concerning the use of the elements of a diagnostic-prescriptive format of instruction with the selected handicapped pupils and with other pupils in the classroom. A reactionnaire to provide feedback from participants on their perceptions of the inservice education program was provided (see Appendix D). The envelopes of the group who had not been given the RGEPS prior to the inservice sessions included that instrument. Participants were requested to complete the forms and mail them in the envelopes provided.

Classroom observations were conducted to verify the implementation of the individualized curriculum. Observations were conducted simultaneously by the researcher and a graduate of a Master of Education program that included the successful completion of a practicum utilizing a diagnostic-prescriptive format of instruction. The duration of the observation session was one teaching period.

### Data Analysis and Hypotheses

An analysis of variance test was employed to test the following null hypotheses.

$H_{01}$ : There will be no significant difference ( $\alpha < .05$ ) between the mean score on the RGEPS for the groups of teachers who have not participated in the inservice education program and the mean score for the

group of teachers who have participated in the inservice education program.

A Chi-square test was employed to test the following null hypotheses.

H<sub>02</sub>: There will be no significant difference ( $\alpha < .05$ ) between teachers prior to participating in the inservice education program and teachers after participating in the inservice education program with regard to the number of elements of a diagnostic-prescriptive format of instruction used with a selected handicapped pupil.

H<sub>03</sub>: There will be no significant difference ( $\alpha < .05$ ) between teachers prior to participating in the inservice education program and teachers after participating in the inservice education program with regard to the number of elements of a diagnostic-prescriptive format of instruction used with other pupils in their classrooms.

The interobserver reliability of the data collected by the two observers regarding the utilization of a diagnostic-prescriptive format was computed by dividing the number of observation items in agreement by the total number of observation items multiplied by 100, thereby yielding percent of agreement (Herson & Barlow, 1976).



## CHAPTER IV

### RESULTS

The purpose of this study was to observe whether a diagnostic-prescriptive inservice education program is related to regular classroom teachers' attitudes toward handicapped pupils. Involved was the formulation and pilot testing of an inservice education program focusing on the development of selected knowledges and skills. The results are presented in this chapter.

#### Subjects

Regular classroom teachers from two school districts participated in the study. Of the 74 regular classroom teachers who volunteered for the inservice education program, 60 completed the program. Reasons for this attrition and implications of this attrition will be discussed in Chapter V.

#### Relation of Inservice Education and Attitudes

The Rucker-Gable Educational Programming Scale (Rucker & Gable, 1973) was used to measure changes in regular classroom teachers' attitudes toward handicapped pupils resulting from the pilot test of an inservice education program. An analysis of variance test of statistical significance was employed to test the following null hypothesis.

$H_{01}$ : There will be no significant difference ( $\alpha < .05$ ) between the mean score on the RGEPS for the groups of teachers who have not participated in the inservice education program and the mean score for the group of teachers who have participated in the inservice education program.

Table 1

Analysis of Variance for Groups on the  
Rucker-Gable Educational Programming Scale

Source	SS	df	MS	F
Between	1412.78	2	706.39	
Within	13108.95	57	229.98	3.08
Critical value from the F-Distribution Table = 3.15 ( $\alpha < .05$ ).				

Results of the analysis of variance test of significance are presented in Table 1. Based on the statistical analysis, the null hypothesis could not be rejected as the differences were not found to be significant,  $F(2,57) = \alpha < .05$ .

Relation of Inservice Education and the Use  
of a Diagnostic-Prescriptive Format

Use of a diagnostic-prescriptive format was measured by determining the number of elements of this format of instruction the teachers were employing before participating in the inservice education program and after participating in the inservice education program with a selected handicapped pupil. Teacher self report was used to assess the use of a diagnostic-prescriptive format before participating in the inservice

education program. Teacher self report, a case study, and classroom observations were used to assess the use of a diagnostic-prescriptive format after participating in the inservice education program. A Chi-square test was employed to test the following null hypothesis.

$H_0$ : There will be no significant difference ( $\alpha < .05$ ) between teachers prior to participating in the inservice education program and teachers after participating in the inservice education program with regard to the number of elements of a diagnostic-prescriptive format of instruction utilized with a selected handicapped pupil.

Table 2

Contingency Table of Expected and Observed Frequencies  
of Number of Elements of a Diagnostic-Prescriptive Format  
Used With a Selected Handicapped Pupil

Group	Number of Diagnostic-Prescriptive Format Elements			
	None	Part	All	
After Inservice	4	16	22	42
	7	21.5	13.5	
Before Inservice	10	27	5	42
	7	21.5	13.5	
	14	43	27	84

$$\chi^2 (2, 0.05) = 16.09$$

$$\chi^2 = 6.00$$

Critical value from  $\chi^2$  Distribution Table = 6.00

Table 2 presents the expected and observed frequencies in a contingency table. The results shown in Table 2 indicate that  $H_0$  could be

rejected. A marked increase was found in the use of the elements of a diagnostic-prescriptive format of instruction. At the same time, a marked decrease in the number of inservice participants who were using none of the elements of a diagnostic-prescriptive format of instruction was shown.

Table 3 presents the percent of participant use of each of the elements of a diagnostic-prescriptive format with the selected handicapped pupil before and after completing the inservice education program. This information was generated by teacher self report before the inservice education program and by self report, a case study, and observations after participating in the inservice education program.

Table 3  
Use of Diagnostic-Prescriptive Elements Before and After  
the Inservice Education Program with a Handicapped Pupil

Diagnostic-Prescriptive Components	Before	After
Learning Profile	26%	74%
Modified Curriculum	29%	71%
Behavioral Objectives	31%	60%
Specialized Instructional Techniques	21%	79%
Appropriate Evaluation Techniques	21%	64%
Appropriate Motivational Techniques	36%	79%
Classroom Management Techniques	43%	76%

Relation of Inservice Education and the Generalized Use  
of a Diagnostic-Prescriptive Format

Use of a diagnostic-prescriptive format of instruction with other pupils was assessed by teacher self report before participating in the inservice education program and after participating in the inservice education program. A Chi-square test was employed to test the following null hypothesis.

$H_0$ : There will be no significant difference ( $\alpha < .05$ ) between teachers prior to participating in the inservice education program and teachers after participating in the inservice education program with regard to the number of elements of a diagnostic-prescriptive format of instruction utilized with other pupils in their classrooms.

Table 4

Contingency Table of Expected and Observed Frequencies  
of Number of Elements of a Diagnostic-Prescriptive Format  
Used with Other Pupils

Group	Number of Diagnostic-Prescriptive Format Elements			
	None	Part	All	
After Inservice	13	24	5	42
	22.5	15.5	4	
Before Inservice	32	7	3	42
	22.5	15.5	4	
	45	31	8	84

$$\chi^2 (2, 0.05) \quad \chi^2 = 6.00$$

Critical value from  $\chi^2$  Distribution Table = 6.00

(Note: Table 4 contains expectancy cells less than 5, therefore results should be used with caution.)

The expected and observed frequencies are presented in a contingency table in Table 4. The results shown in Table 4 indicate that  $H_{03}$  could be rejected.

#### Reliability of Observational Data

Classroom observations were conducted for 36 of the 42 teachers who participated in the inservice program to verify the implementation of the individualized curriculum with the handicapped pupil selected by each teacher for the case study. Observations were conducted simultaneously by the researcher and an individual who had successfully completed a practicum in the utilization of a diagnostic-prescriptive format of instruction.

Six out of the 42 teachers who participated in the inservice program were not observed interacting with the pupil who was selected by each teacher for the case study. During 2 observations, the pupils were called to the special education room. On 3 occasions, school programs interfered with the observations and in 1 instance, the teacher was absent from school due to a family death.

Percent of agreement was computed by dividing the number of observation items multiplied by 100. Percent of agreement ranged from a low of 57% to a high of 100%. Table 5 summarizes the percent of agreement for each observation.

Table 5  
Percent of Agreement for Each Observation

Observation	%	Observation	%
1	100	19	100
2	100	20	100
3	86	21	100
4	100	22	86
5	100	23	100
6	86	24	86
7	86	25	100
8	100	26	100
9	100	27	100
10	86	28	100
11	100	29	100
12	100	30	100
13	100	31	100
14	100	32	100
15	100	33	100
16	100	34	100
17	86	35	100
18	100	36	57

#### Reaction to the Inservice Education Program

Teachers' comments on the reactionnaire provided useful feedback concerning the inservice education program that was pilot tested. Four of the 42 teachers reported that they did not employ a diagnostic-prescriptive format of instruction with the selected handicapped pupil. Informal comments of 2 of these 4 teachers revealed that they felt it would be too time consuming to make major changes in the classroom due to the approaching conclusion of the school year. Twelve teachers who did plan and implement an individualized curriculum also stated that it would have been easier to make changes in the classroom at the beginning of the school year. Two teachers gave no reason for their lack of participation. Five of the 16 teachers who were employing part of a

diagnostic-prescriptive format of instruction with the selected handicapped pupil reported this approach to instruction was difficult for the teachers to implement since they had not been familiar with all elements of this approach prior to participating in the inservice program. Implementation of the individualized curriculum required considerable modification in teaching habits for these teachers. Of the 42 participating teachers, 22 indicated that they were able to implement all elements of a diagnostic-prescriptive format. All of the teachers who responded to the question "Did you find the technique effective?" indicated yes.

Twenty-eight of the 42 teachers reported that they felt they had learned enough in the inservice education program to utilize a diagnostic-prescriptive format to effectively integrate a handicapped pupil in the regular classroom. Of the 42 teachers responding to this question, ten felt they needed additional information and skill development. Suggestions included more attention to the emotional and psychological aspects of integrating a handicapped pupil into the group, and implications of test results as they apply to meeting the needs of the handicapped pupil. The other 4 teachers expressed the need for time to assimilate the information, apply the individualized format in the classroom, and practice this format of instruction.

Reported aspects of the inservice education program found most helpful were the "seminar type atmosphere of sharing ideas," the learning profile, practical application in the classroom, and demonstrations of specialized techniques. The reported aspect of the inservice education program found to be least helpful was the use of "behavioral objective language." One respondent indicated the session on motivation techniques was repetitious of other inservice education programs that have been



offered at that particular school.

All respondents indicated satisfaction with the inservice education program. Every teacher reported that (s)he would recommend this inservice education program to other teachers.

One recommendation for increasing the effectiveness of the inservice education program was to schedule the inservice education program at the beginning of the school year.

In summary, the findings of this study were:

1. The inservice education program that was pilot tested did not significantly change regular classroom teachers' attitudes regarding handicapped pupils.

2. Of the regular classroom teachers who participated in the inservice education program that was pilot tested, a significant number were able to employ a diagnostic-prescriptive format of instruction providing an individualized curriculum to meet the needs of a selected handicapped pupil.

3. A significant number of the regular classroom teachers who participated in the inservice education program that was pilot tested indicated that they were using a diagnostic-prescriptive format of instruction with other pupils in their classrooms.

## CHAPTER V

### SUMMARY

As a result of the requirements of The Education of All Handicapped Children Act of 1975 (PL 94-142) regarding individualized educational plans and providing education in the least restrictive environment, teacher attitudes toward handicapped pupils have become a major concern for educators. The review of the literature revealed that negative attitudes toward handicapped pupils do exist, inservice education has been employed to change teachers' attitudes, and selected knowledges and skills have been identified as being necessary to successfully integrate handicapped pupils in regular classrooms. This study addressed the question of modifying regular classroom teachers' attitudes toward handicapped pupils by providing an inservice education program to develop selected teaching knowledges and skills. Volunteer teachers from 2 school districts participated in the pilot test of the inservice education program.

The purpose of the study was to observe whether a diagnostic-prescriptive inservice education program is related to regular classroom teachers' attitudes toward handicapped pupils. Involved was the formulation and pilot testing of an inservice education program focusing on the development of selected knowledges and skills.

The following null hypotheses were tested:

$H_{01}$ : There will be no significant difference ( $\alpha < .05$ ) between the mean score on the RGEPS for the groups of teachers who

have not participated in the inservice education program and the mean score for the group of teachers who have participated in the inservice education program.

Ho<sub>2</sub>: There will be no significant difference ( $\alpha < .05$ ) between teachers prior to participating in the inservice education program and teachers after participating in the inservice education program with regard to the number of elements of a diagnostic-prescriptive format of instruction utilized with a selected handicapped pupil.

Ho<sub>3</sub>: There will be no significant difference ( $\alpha < .05$ ) between teachers prior to participating in the inservice education program and teachers after participating in the inservice education program with regard to the number of elements of a diagnostic-prescriptive format of instruction utilized with other pupils in their classrooms.

Data were collected from the regular classroom teachers before and after participating in the inservice education program. These data included the RGEPS to assess attitudes toward handicapped pupils, teacher self report, a case study, and classroom observation to assess the use of a diagnostic-prescriptive format of instruction.

Using the analysis of variance test, Ho<sub>1</sub> showed that no significant difference ( $\alpha < .05$ ) in teachers' attitudes toward handicapped pupils occurred as a result of participating in the inservice education program. Ho<sub>1</sub> could not be rejected.

Ho<sub>2</sub> was tested with a Chi-square test. After participation in the inservice education program, teachers demonstrated a significant ( $\alpha < .05$ ) increase in the use of a diagnostic-prescriptive format of instruction

with a selected handicapped pupil.  $H_{02}$  could be rejected.

$H_{03}$  was tested with a Chi-square test. After participation in the inservice education program, teachers demonstrated a significant ( $\alpha < .05$ ) increase in the use of a diagnostic-prescriptive format of instruction with other pupils in their classrooms.  $H_{03}$  could be rejected although this conclusion is tenuous because of expectancy cells less than 5 in the contingency table.

### Conclusions

The following conclusions were drawn from this study.

1. The inservice education program that was formulated and pilot tested did not result in significant attitude change toward handicapped pupils. Since all participants reported satisfaction with the content of the inservice education program other variables should be identified that might have influenced these results.

2. An individualized curriculum to meet the needs of a handicapped pupil can be implemented in the regular classroom.

3. Teachers did generalize the use of an individualized approach to the other pupils in the classroom. This conclusion must be used with caution due to questionable statistical factors. This conclusion suggests that the teachers adopt this format of instruction as a response to perceived needs in their classrooms.

### Discussion

#### Subjects

The subjects were volunteer teachers. This implies a level of commitment on the part of these teachers to develop knowledges and skills

which other teachers who had the opportunity to participate in the inservice education program did not reveal.

The attrition of 14 teachers from the volunteer pool of 74 was unfortunate. Differential mortality of the volunteer teachers was attributed to several factors. Increased professional duties was frequently cited as the reason for withdrawal from the inservice education program. End-of-the-year testing and record keeping were the most common duties reported for the inability to continue the program.

The study was conducted in 2 school districts in Northeast Florida. This sample cannot be considered representative of the larger population.

#### Change in Teacher Attitudes

The inservice education program that was pilot tested did not significantly change the teachers' attitudes toward handicapped pupils as measured by the RGEPS. This instrument was developed to assess the effectiveness of inservice programs in regard to placing handicapped pupils in regular classrooms, therefore, the RGEPS appears to be an appropriate instrument to assess attitude change toward handicapped pupils.

The literature on attitude change toward handicapped pupils in educational settings reveals that teacher attitudes are expected to change in a positive manner with increased knowledge, skill development, and practical experience with handicapped pupils (Barnes, 1975; Cronk, 1978; Haring, 1956). The results of the present study do not support the findings of the above studies. However, the results of the present study are consistent with the standpoint that attitude change may be difficult to accomplish in that attitudes are generally stable and resistant to change (Blair & Kershner, 1976; Sherif & Sherif, 1976; Swanson, 1972).

The time dimension is another variable to be considered. An extensive history of negativistic attitudes toward handicapped individuals has occurred (Gottlieb, 1975). Special education classes evolved originally from the desires of regular classroom teachers to remove troublesome pupils from their classes according to Esten (1900, cited in Gottlieb, 1975). The inservice education program was completed in a period of 5 weeks. Inservice teachers were expected to make major changes in their teaching methods and classroom environment in a relatively short period of time. The assumption was that attitudes would change simultaneously. Perhaps measurement of attitudes with a lapse of time following completion of the inservice education program, thus allowing teachers to integrate a diagnostic-prescriptive format of instruction into their teaching style, would reveal a significant difference. Since attitudes are changed through new experiences especially if these experiences are positive (Bond & Weisgerber, 1977), continued implementation of the knowledge and skills of the inservice education program might influence attitude change during such an extension of time.

#### Change in Teacher Behavior

Teacher self report, a case study, and classroom observations were employed to assess change in teacher behavior. Data from these measurements support significant ( $\alpha < .05$ ) change in teacher behavior with regard to the implementation of a diagnostic-prescriptive format of instruction with a selected handicapped pupil. This change may be explained by the step-by-step evolution of the case study. An assignment was made following each inservice sessions. These assignments were reviewed and discussed by the inservice leader and other participants.

This support encouraged program participants in the development of the case study.

Another variable which might have influenced the adoption of this format of instruction was that the procedures chosen by teachers in implementing a diagnostic-prescriptive format of instruction allowed flexibility. The self selection of implementation procedures may induce each teacher to experiment with modifications which were compatible with that teacher's style of teaching.

Commitment of the participants to change is another variable to be considered. Since the teachers volunteered to participate in the inservice education program, motivation for change is implied.

#### Use of a Case Study

The use of a case study model allowed for relevant application of the principles of a diagnostic-prescriptive format of instruction. It has been shown that inservice education is more effective when there is a balance between theory and practice (Nicholson et al., 1976). Teacher comments on the reactionnaire indicated that the case study model added to the meaningfulness of the inservice education program.

The use of the case study model was appropriate because of the flexibility involved. The case study descriptions showed that pupils representing a cross section of handicapping conditions were chosen as subjects. The major categories were the mentally handicapped, emotionally handicapped, and learning disabled. There were suggestions for additional knowledges or skills from program participants in regard to emotional and psychological aspects of integrating handicapped pupils in regular classrooms, application of assessment information to educational practice, and an expansion of time to allow assimilation, application, and

practice of a diagnostic-prescriptive format of instruction. Since the inservice education program was a pilot test, modifications to incorporate these suggestions should be made in future offerings.

#### Teacher Use of a Diagnostic-Prescriptive Format with Other Pupils

Teacher self report was used to assess the generalized use of a diagnostic-prescriptive format of instruction with pupils other than the subjects of the case study. A significant ( $\alpha < .05$ ) number of the teachers indicated that they were employing this approach to teaching with other pupils.

Since behavior generally reflects ones' attitudes about a concept (Bond & Weisgerber, 1977; Sherif & Sherif, 1976) the use of a diagnostic-prescriptive format with others would indicate acceptance of this format of instruction as a way of meeting the needs of pupils. This is also consistent with the social learning theory approach to attitude change. This theory discards the concept of attitudes in favor of different kinds of behaviors that are controlled by different consequences. If the consequences of a specific behavior are positive or rewarding, the behavior is likely to recur (Zimbardo, Ebbesen, & Maslack, 1977).

#### Inservice Education Program Content

One focus of this study was an attempt to formulate and pilot test an inservice education program based on knowledges and skills that have been identified as necessary to successfully integrate handicapped pupils in regular classrooms. The literature revealed agreement as to which knowledges and skills are essential.

Reactionnaire responses from the inservice education program participants showed satisfaction with the content of the program. All



comments were positive in this regard. There were suggestions for additional knowledges or skills from program participants in regard to emotional and psychological aspects of integrating handicapped pupils in regular classrooms, application of assessment information to educational practice, and an expansion of time to allow assimilation, application, and practice of a diagnostic-prescriptive format of instruction. Since the inservice education program was a pilot test, modifications to reflect these suggestions should be made in future offerings.

### Implications

The results of the present study concerning teacher attitudes are difficult to interpret in regard to previous research due to the unanticipated setbacks that were encountered. Since there is a body of research that shows inservice education to be a viable method of modifying teachers' attitudes, two alternatives are suggested: (1) replication of the present study under more stringent conditions and (2) identification of interfering variables.

This study demonstrated that the use of a format for individualizing instruction is not a common practice among regular classroom teachers. Relying on comments from inservice education program participants that they had received inadequate training in various aspects of this teaching approach, one could assume that school districts need to include this topic in future plans for professional development programs. The need for skill development in a diagnostic-prescriptive format of instruction should also be reflected in teacher education programs at the preservice level.

Another future need regards inservice instructional materials.

School districts or publishers may wish to develop handbooks devoted to techniques for individualizing instruction in regular classroom settings.

An additional need identified during this study involves time for interaction between regular classroom teachers and special education personnel within the school. Information for the construction of the learning profile in the case study was obtained from special education personnel in most cases. Participants commented that it was very beneficial to have extensive communication with special education personnel regarding the needs of handicapped pupils. A systematic schedule to provide time for interaction between regular classroom teachers and special education personnel should be provided.

There were some weaknesses in this study which should be remedied in future research. The following should receive special attention.

1. The population from which the sample was drawn was not representative.
2. The research design limited generalizability of results.
3. The time of the school year that the inservice sessions occurred appeared to jeopardize results.

#### Recommendations

Further research should attempt to correct the weaknesses mentioned above. In addition, several questions remain unanswered which could provide the basis for future research.

1. The literature would suggest that inservice education programs can influence attitude modification. Additional factors such as the time variable related to inservice education programs should be investigated.

2. The effects of extraneous school environmental factors, such as support services, on teacher attitudes toward handicapped pupils should be identified.

3. Factors that interact with commitment to change merit attention. This is particularly important because of the changing role of regular classroom teachers.

4. The effects of each element of a diagnostic-prescriptive format of instruction should be examined in reference to pupil achievement.

5. Long term evaluation of the utilization of a diagnostic-prescriptive format of instruction should be conducted.

## REFERENCES

- Abeson, A., & Zettel, J. The end of the quiet revolution: The education of all handicapped children act of 1975. Exceptional Children, 1977, 44, 114-128.
- Almanza, H. P. Where are we going: Reflections on mainstreaming. In P. H. Mann (Ed.), Shared responsibility for handicapped students: Advocacy and programming. Coral Gables: University of Miami Training and Technical Center, 1976.
- ✓Barnes, E. B. Developing receptivity toward labeled children. Paper presented at the meeting of the Special Study Institute Fostering Positive Attitudes Toward the Handicapped in School Settings, Rensselaerville, New York, May 1975.
- Birch, J. W. Special education for exceptional children through regular school personnel and programs. In M. C. Reynolds & M. D. Davis (Eds.), Exceptional children in regular classrooms. Washington, D. C.: U. S. Office of Education, 1971.
- Birch, J. W. Mainstreaming: Educable mentally retarded children in regular classes. Washington, D. C.: U. S. Office of Education, 1974.
- Birch, J. W. Issues and problems in mainstreaming. In P. H. Mann (Ed.), Shared responsibility for handicapped students: Advocacy and programming. Coral Gables: University of Miami Training and Technical Assistance Center, 1976.
- Blair, M. W., & Kershner, K. M. Development of the research for better schools student attitude survey. Philadelphia: Research for Better Schools, 1976.
- Bond, R., & Weisgerber, R. Mainstreaming the handicapped in vocational education: Developing a positive attitude. Palo Alto: American Institute for Research in the Behavioral Sciences, 1977.
- Brodwin, M. G. Two hundred years of the psychology of attitude - 2000 years of contribution, from Plato to Allport. Paper presented at the meeting of the Annual Convention of the Western Psychological Association, Los Angeles, 1976.
- ✓Brooks, B. L. & Bransford, L. A. Modification of teacher's attitudes toward exceptional children. Exceptional Children, 1971, 37, 259-260.

- Campbell, D. T., & Stanley, J. C. Experimental and quasi-experimental design for research. Chicago: Rand-McNally, 1963.
- Cleary, M. E. Helping children understand the child with special needs. Children Today, 1976, 5, 6-10.
- Cochran, P. V., & Westling, D. L. The principal and mainstreaming: Ten suggestions for success. Educational Leadership, 1977, 34, 506-510.
- ✓Cohen, S. Improving attitudes toward the handicapped. Educational Forum, 1977, 42, 9-20.
- Cronk, M. S. Attitude change toward trainable mentally retarded: "Mainstreaming in reverse." Paper presented at the meeting of the World Congress on Future Special Education, Stirling, Scotland, June 1978.
- Donaldson, J., & Martinson, M. C. Modifying attitudes toward physically disabled persons. Exceptional Children, 1977, 43, 337-341.
- Garnett, J. "Special" children in a comprehensive. Special Education Forward Trends, 1976, 3, 8-11.
- Gorelick, M. C. What's in a label? Careers in integrated early childhood programs. Northridge, California: California State University, 1973.
- Gottlieb, J. Public, peer, and professional attitudes toward mentally retarded persons. In M. G. Begab & S. A. Richardson (Eds.), The mentally retarded and society. Baltimore: University Park, 1975.
- Graubard, P. S. Children with behavior disorders. In L. M. Dunn (Ed.), Exceptional children in schools. New York: Holt, Rinehardt & Winston, 1973.
- Grotzky, J. N. Mainstreaming, integration, deinstitutionalization, non-labeling, normalization, mainlining, or declassification. In P. H. Mann (Ed.), Shared responsibility for handicapped students: Advocacy and programming. Coral Gables: University of Miami Training and Technical Assistance Center, 1976.
- Hall, K. A., Cartwright, G. P., & Mitzel, H. E. Care: Computer assisted renewal education. In P. H. Mann (Ed.), Mainstreaming special education. Reston, Virginia: Council for Exceptional Children, 1975.
- Halloran, J. D. Attitude formation and change. Westport, Connecticut: Greenwood, 1976.
- Harasymiw, S. J., & Horne, M. D. Integration of handicapped children: Its effect on teacher attitudes. Education, 1975, 96, 153-158.

- Haring, G. N. A study of the attitudes of classroom teachers toward exceptional children. (Doctoral dissertation, Syracuse University). Dissertation Abstracts, 1956, 19, 378. (University Microfilms No. 19, 378).
- Hersh, A., Carlson, R. W., & Lossino, D. A. Normalized interaction with families of the mentally retarded - to introduce attitude and behavior change in students in professional discipline. Mental Retardation, 1977, 15, 32-22.
- Herson, M., & Barlow, D. H. Single-case experimental designs: Strategies for studying behavior change. New York: Pergamon, 1976.
- Hewett, F. M., & Forness, S. R. Education of exceptional learners. Boston: Allyn & Bacon, 1974.
- Isaacson, S. Personnel training to facilitate mainstreaming: Design of instruction presented for classroom teachers serving handicapped children. Paper presented at the Annual International Convention, The Council for Exceptional Children, Atlanta, April 1977.
- Jones, R. L. The hierarchical structure of attitudes toward the exceptional. Exceptional Children, 1974, 40, 430-435.
- Klein, J. Teaching the special child in the regular classroom. Urbana, Illinois: ERIC Clearinghouse on Early Childhood Education, 1977.
- Lewis, A. J. Increasing educational services to handicapped children in regular schools. In M. C. Reynolds and M. D. Davis (Eds.), Exceptional children in regular classrooms. Washington, D. C.: U. S. Office of Education, 1971.
- Mann, P. H., & McClung, R. M. Training regular teachers in learning disabilities. In P. H. Mann (Ed.), Mainstreaming special education. Reston, Virginia: Council for Exceptional Children, 1975.
- Manzitti, E. T., Boratynski, F. & Radar, B. T. An evaluation of mainstreaming in vocational education programs in the state of Michigan. East Lansing: Michigan State University, 1976.
- Markell, C. Exceptional students in regular classes: Interviews with 43 North Dakota elementary teachers. Minot, North Dakota: Minot State College, 1976.
- Marsh, V., & Friedman, R. Changing public attitudes toward blindness. Exceptional Children, 1972, 387, 426-428.
- Martin, E. W. Some thoughts on mainstreaming. Exceptional Children, 1974, 41, 150-153.
- Meisgeier, C. A. The Houston plan. In P. H. Mann (Ed.), Mainstream special education. Reston, Virginia: Council for Exceptional Children, 1975.

- Melcher, J. W. Law, litigation, and handicapped children. Exceptional Children, 1976, 43, 126-130.
- Mitchell, M. M. Teacher attitudes. The High School Journal, 1976, 59, 302-312.
- Mopsik, S. I., & Hession, L. A. The Maryland design for a continuum of special education services. In P. H. Mann (Ed.), Mainstream special education. Reston, Virginia: Council for Exceptional Children, 1975.
- Nicholson, A. M., Joyce, B. R., Parker, D. W., & Waterman, F. T. The literature on inservice teacher education. An analytic review ISTE Report III. Washington, D. C.: National Center for Education Statistics, 1976.
- Novotny, P. A. Mainstreaming the emr is neither a panacea nor a simple solution: A research study, 1974 (ERIC Document Reproduction Service No. ED 101 522).
- Public Law 94-142, Education for All Handicapped Children Act, November 29, 1975.
- Prothero, J. C., & Ehlers, W. H. Social work students' attitudes and knowledge changes following study of programmed materials. American Journal of Mental Retardation, 1974, 79, 83-86.
- ✓Rucker, C. N., & Gable, R. K. Rucker-Gable Educational Programming Scale. Storrs, Connecticut: Rucker-Gable Associates, 1973.
- Rucker, C. N., & Gable, R. K. Rucker-Gable Educational Programming Scale Manual. Storrs, Connecticut: Rucker-Gable Associates, 1974.
- Sanford, A., Samrau, B., & Wilson, D. The Chapel Hill model for training Head Start personnel in mainstreaming handicapped children. Winston-Salem, North Carolina: Kaplan School Supply, 1974.
- Sherif, C. W., & Sherif, M. (Eds.). Attitude, ego-involvement and change. Westport, Connecticut: Greenwood, 1976.
- Swanson, J. C. Second thoughts on knowledge and attitude effects upon behavior. Journal of School Health, 1972, 6, 363-365.
- Triandis, H. C. Attitude and attitude change. New York: John Wiley & Sons, 1971.
- Whiteford, E. B., & Anderson, D. H. The mainstreaming of special needs students: Home ec teachers are coping. American Vocational Journal, 1977, 52, 42-44.
- Witty, E. Preparing teachers for mainstreaming in the department of special education. In P. H. Mann (Ed.), Shared responsibility for handicapped students: Advocacy and programming. Coral Gables: University of Miami Training and Technical Assistance Center, 1976.

- Wolf, J. M. Designing and implementing a mainstream course for regular early educators. Minneapolis: University of Minnesota, 1975.
- Young, M. E. Mainstreaming in a large urban school district: An administrator comments on the Philadelphia experience. In P. H. Mann (Ed.) Shared responsibility for handicapped students: Advocacy and programming. Coral Gables: University of Miami Training and Technical Assistance Center, 1976.
- Zimbardo, P. G., Ebbesen, E. B., & Maslack, C. Influencing attitudes and changing behavior. Menlo Park, California: Addison-Wesley, 1977.



## APPENDIX A

### DIAGNOSTIC-PRESCRIPTIVE FORMAT

The diagnostic-prescriptive format has been defined as a teaching model which includes a learning profile, objectives, materials, methods, evaluation procedures, motivational, and behavioral and classroom management techniques that form a curriculum for an individual pupil. Descriptions of each component follow.

#### I. Learning Profile

A learning profile will be compiled from assessment and observation information. Extensive data and information will be available from the pupil's cumulative folder due to staffing procedure requirements for handicapped pupils. Psychological reports and summaries from formal and informal testing can be utilized. Teacher observations and teacher-made tests provide useful sources of information.

##### A. Learning Style

1. Strongest input modality
2. Weakest input modality
3. Strongest output modality
4. Weakest output modality

##### B. Learning Aptitude

##### C. Intelligence Quotient

##### D. Achievement Scores

1. Standardized tests

## 2. Informal tests to determine current functional level

Educational implications of how each of these factors impacts on the learning process will be described.

### II. Curriculum Modification

One curriculum area will be task analyzed. Appropriate components from the analyzed curriculum will be selected and modified to accommodate the strengths and weaknesses of the pupil's learning profile.

### III. Materials and Methodology to Implement the Curriculum

Materials will be selected that are compatible with information summarized in the learning profile. Materials will match or be modified to correlate with the pupil's present level of functioning and identified strengths and weaknesses. They will be consistent with the pupil's strongest input modality.

Methodology and instructional techniques will be compatible with information summarized in the learning profile. Learning activities will be correlated with the pupil's present level of functioning. Learning activities will be presented in a manner consistent with the pupil's strongest input modality.

### IV. Evaluation Procedures and Behavioral Objectives to Implement the Curriculum

Evaluation procedures will be based on the content of the learning activities. The form of the evaluation measures will be consistent with the pupil's strongest output modality. Evaluation procedures will be stated in the behavioral objectives.

Objectives will be written to contain the following components (minimum). Each objective will state (1) what the learner will be doing,

(2) under what conditions the learner will perform the activity, and (3) criteria acceptable for successful completion of the objective.

V. Classroom Management, Motivation, and Behavioral Management Techniques to Implement the Curriculum

A classroom organization plan will be devised to provide for the needs of the handicapped pupil within regular classroom setting.

Motivational strategies will be identified that are appropriate based on information available concerning the handicapped pupil. Behavior management techniques to elicit or maintain desirable behaviors related to the handicapped pupil will be listed.

APPENDIX B  
QUESTIONNAIRE

A diagnostic-prescriptive format has the components listed below. When answering this questionnaire, refer to the diagnostic-prescriptive format description. Have you used a diagnostic-prescriptive process?

	With Case Study Pupil		With Other Pupils		
	yes	no	yes	#	no
1. Constructed a learning profile	_____	_____	_____	_____	_____
2. Modified the curriculum based on learning profile	_____	_____	_____	_____	_____
3. Behavioral objectives written	_____	_____	_____	_____	_____
4. Instructional strategies based on learning profile implemented	_____	_____	_____	_____	_____
5. Evaluation procedures based on learning profile implemented	_____	_____	_____	_____	_____
6. Motivational techniques employed	_____	_____	_____	_____	_____
7. Behavioral management techniques employed	_____	_____	_____	_____	_____

APPENDIX C  
OBJECTIVES FOR INSERVICE TRAINING SESSIONS

Session I

1. Upon completion of Session I, the participant will be able to list the characteristics of a selected handicapped pupil that account for the identification of this pupil as being handicapped.
2. Upon completion of Session I, the participant will be able to describe the major effects of the handicapping condition of the selected pupil on the learning process.
3. Upon completion of Session I, the participant will be able to construct a learning profile for the selected handicapped pupil.

Assignments:\*

1. Select an identified handicapped pupil in the classroom.
2. List the characteristics that have resulted in the pupil's identification as handicapped.
3. Describe how each characteristic interferes with the learning process.
4. Utilizing this information, information from the pupil's cumulative folder, and criterion-referenced testing, construct a learning profile for the selected pupil.

\*The assignments will form a case study for the target pupil. Each assignment will be evaluated by the inservice education program leader. Formative evaluation procedures will be utilized to provide feedback to program participants.

## Session II

1. Upon completion of Session II, the participant will be able to task analyze a subject area.
2. Upon completion of Session II, the participant will be able to modify a subject area curriculum to meet the needs of the selected pupil.

### Assignments:

1. List the hierarchy of skills, concepts, etc. expected to be mastered by classroom pupils for one unit of one subject area curriculum.
2. Describe how this curriculum should be modified to account for the strengths and weaknesses of the selected pupil.

## Session III

1. Upon completion of Session III, the participant will be able to identify and/or modify materials and media to account for the strengths and weaknesses of the selected pupil.
2. Upon completion of Session III, the participant will be able to identify appropriate instructional techniques to account for the strengths and weaknesses of the selected pupil.

### Assignments:

1. List materials and media available to develop the modified curriculum.
2. Describe modifications necessary to account for the strengths and weaknesses of the selected pupil.
3. List instructional techniques that are appropriate for the selected pupil.

## Session IV

1. Upon completion of Session IV, the participant will be able to identify evaluation procedures to account for the strengths and weaknesses of the selected pupil.
2. Upon completion of Session IV, the participant will be able to write behavioral objectives that will include (a) what the learner will be doing, (b) under what conditions the learner will perform the activity, and (c) criteria acceptable for successful completion of the objectives.

Assignments:

1. Design evaluation procedures for the modified curriculum that are appropriate for the selected pupil.
2. Write terminal and enroute behavioral objectives for the modified curriculum. These objectives must include (a) what the learner will be doing, (b) under what conditions the learner will perform the activity, and (c) criteria acceptable for successful completion of the objective.

## Session V

1. Upon completion of Session V, the participant will be able to organize the learning environment to facilitate instruction for the handicapped pupil and the normal pupils in the classroom.
2. Upon completion of Session V, the participant will be able to identify classroom management techniques to:
  - A. Elicit and maintain desirable behaviors from the selected pupil.
  - B. Provide motivation for desirable performance of the selected pupil.

Assignments:

1. Devise a plan for the management of instruction to accommodate the selected pupil within the regular classroom.
2. List appropriate management techniques to elicit and maintain desirable behavior of the selected pupil.
3. List strategies to motivate the selected pupil.



APPENDIX D

REACTIONNAIRE

1. Have you used a diagnostic-prescriptive format with the pupil who served as your case study?
2. Do you feel that you have learned enough in this inservice education program to utilize a diagnostic-prescriptive format to effectively integrate a handicapped pupil in the regular classroom?
3. What aspects of the inservice education program did you find most helpful?
  - a) Least helpful?
4. What recommendation would you make to increase the effectiveness of this inservice education program?
5. Do you feel that the length of the inservice education program provided adequate time to master the objectives?
6. Do you feel that the five week time span was adequate to implement a diagnostic-prescriptive format with the case study?
7. Would you recommend this inservice education program to other teachers?


## BIOGRAPHICAL SKETCH

Mary Elizabeth Rose D'Zamko was born in Brunswick, Georgia. She received her elementary education in the Camden County Public School System. Her secondary education was in the Glynn County Public School System, with graduation from Glynn Academy. She received a B.A. from Jacksonville University in 1972 and an M.Ed. from the University of North Florida in 1974.

Her professional experience includes 13 years of teaching in public, private, and parochial schools. This experience included teaching Head-start, grades four through eight, secondary science, and reading for handicapped pupils. She has been employed in the Special Education Department at the University of North Florida for 5 years where she is academic advisor and teaches introductory courses in special education and learning disabilities, special methods, mainstreaming skills for regular classroom teachers, and supervises internships.

Mary Elizabeth is married to George D'Zamko. They have five children.


I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.



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William D. Hedges, Chairman  
Professor of Instructional Leadership  
and Support

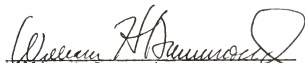
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James C. Cangelosi  
Associate Professor of Instructional  
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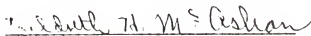
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Professor of Instructional Leadership  
and Support

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.



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This dissertation was submitted to the Graduate Faculty of the Division of Curriculum and Instruction in the College of Education and to the Graduate Council, and was accepted as partial fulfillment of the requirements for the degree of Doctor of Education.

December, 1979

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